



## Patent Abstracts of Japan

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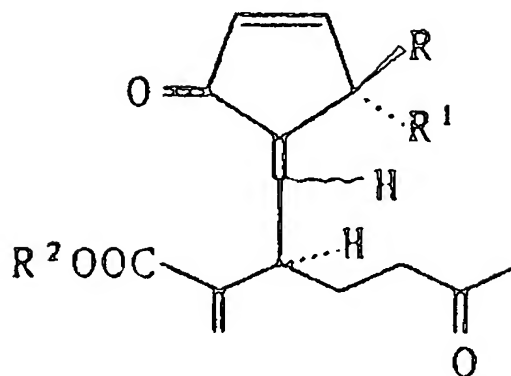
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TITLE : ANTITUMOR ACTIVE SUBSTANCE  
ACHIMILIC ACID



ABSTRACT : NEW MATERIAL: A compound expressed by the formula (R and R<sup>1</sup> are CH<sub>3</sub> or OH; R<sup>2</sup> is H or lower alkyl; the wavy line represents Z or E isomer).

EXAMPLE: Methyl achimilate A.

USE: A medicine having antitumor action.

PREPARATION: The flower part of *Achillea millefolium* L. of the family Composite which a natural polyoxide having antitumor action is dried and extracted with a polar organic solvent, e.g. methanol, at room temperature for several days and the resultant extract is separated by shaking using a water-immiscible lower alcohol, e.g. butanol. An acidic substance is then extracted with a basic solution and an aqueous layer is acidified and extracted with an organic solvent, e.g. ethyl acetate. The resultant acidic substance is separated by silica gel chromatography to afford the aimed active substance corresponding to P388 (achimilic acid) expressed by the formula (R<sup>2</sup> is H), which is then esterified to give the compound expressed by the formula (where R<sup>2</sup> is alkyl).